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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,814	01/22/2004	David Bau	ORACL-01388US1	6120
80548	7590	11/17/2009	EXAMINER	
FLIESLER MEYER LLP			CHEN, QING	
650 CALIFORNIA STREET				
14TH FLOOR				
SAN FRANCISCO, CA 94108				
			ART UNIT	PAPER NUMBER
			2191	
			NOTIFICATION DATE	DELIVERY MODE
			11/17/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OFFICEACTIONS@FDML.COM

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/762,814	BAU, DAVID	
	<b>Examiner</b>	<b>Art Unit</b>	
	Qing Chen	2191	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on July 27, 2009.
2. ☒ The allowed claim(s) is/are 1-10,12-14,23-32,34-36,44-53,55-57,68 and 69, renumbered as 1-41.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date ____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date ____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other ____.</li> </ol> |
|--|---|

**DETAILED ACTION**

1. This Office action is in response to the amendment filed on July 27, 2009.
2. **Claims 1-10, 12-14, 23-32, 34-36, 44-53, 55-57, 68, and 69** are pending.
3. **Claims 1, 6, 12, 23, 26, 28, 34, 44, 55, 68, and 69** have been amended.
4. **Claims 67-69** have been added.
5. **Claims 11, 15-22, 33, 37-43, 54, and 58-67** have been canceled.
6. **Claims 1-10, 12-14, 23-32, 34-36, 44-53, 55-57, 68, and 69** are allowed, renumbered as 1-41.
7. The objection to the title is withdrawn in view of Applicant's amendments to the title.
8. The objections to Claims 40 and 58 are withdrawn in view of Applicant's cancellation of the claims.
9. The 35 U.S.C. § 112, first paragraph, rejections of Claims 15-17 are withdrawn in view of Applicant's cancellation of the claims.
10. The 35 U.S.C. § 112, second paragraph, rejections of Claims 26, 40, and 64 are withdrawn in view of Applicant's amendments to the claims or cancellation of the claims.
11. The 35 U.S.C. § 101 rejections of Claims 1-22 are withdrawn in view of Applicant's amendments to the claims.
12. It is noted that Claims 6 and 28 contain proposed amendments. However, the claims still bear the "Previously Presented" status identifier.
13. It is noted that Claim 57 contains no proposed amendments. However, the claim bears the "Currently Amended" status identifier.

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***Examiner's Amendment***

14. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Kuiran (Ted) Liu (Reg. No. 60,039) on October 5, 2009.

The application has been amended as follows:

**AMENDMENTS TO THE SPECIFICATION**

Please amend the title as follows:

Marshaling And Un-Marshaling Data Types In ~~Xml~~ XML And JAVA<sup>[[®]]</sup>

Please amend the abstract as follows:

**[0070]** The use of XML types can allow the combination of XML<sup>[[ - ]]</sup> and JAVA<sup>®</sup> <sup>[[ - ]]</sup> type systems, which overcomes many deficiencies in existing marshaling and unmarshaling systems by translating XML schemas which define XML data in an XML document into XML types in ~~Java~~ JAVA<sup>®</sup>. Unlike traditional attempts at translating between XML and ~~Java~~ JAVA<sup>®</sup>, XML schemas realized as XML types can remain fully faithful to the XML, and are capable of a

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number of XML data operations. In addition, the XML types can be easily transformed among themselves and ~~Java~~ JAVA® types, and a lightweight store retaining XML information at tag level allows incremental XML marshaling and unmarshaling.

### AMENDMENTS TO THE CLAIMS

Please cancel Claim 67 and amend Claims 1, 12, 23, 34, 44, 55, 68, and 69 as follows:

1. (Currently Amended) A computer-implemented system to marshal and unmarshal data between an extensible markup language (XML) and an object-oriented programming language, comprising:

an XML schema which defines an XML data; and

a compiler, running on one or more processors of the computer-implemented system, to generate an object-oriented programming language type from the XML schema, wherein the object-oriented programming language type is automatically generated for an object-oriented programming language component as an inner class to an XML control interface for the object-oriented programming language component,

wherein the object-oriented programming language type corresponds to the XML schema and provides XML-oriented data manipulation, wherein the object-oriented programming language type extends from a base type that allows the combination of an XML type system and an object-oriented programming language type system and can access and manipulate the XML data from within the object-oriented programming language type system,

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wherein the object-oriented programming language type executes one or more XML data operations provided by the XML type system, on the XML data, to generate one or more result sets in the object-oriented programming language type system, wherein each of the one or more XML data operations is one of

- an XML data query operation;
- an XML data transformation operation; and
- an XML data iteration operation.

12. (Currently Amended) The computer-implemented system according to claim 1, further comprising:

an XML schema capable of defining [[the]] legal types of the XML data, which include constraints on data types and ranges of the XML data; and constraints on the data types and ranges of the object-oriented programming language type.

23. (Currently Amended) A method to marshal and unmarshal data between an extensible markup language (XML) and an object-oriented programming language, comprising:

defining an XML data using an XML schema;

generating, via a compiler running on one or more processors, an object-oriented programming language type from the XML schema, wherein the object-oriented programming language type is automatically generated for an object-oriented programming language component as an inner class to an XML control interface for the object-oriented programming language component, wherein the object-oriented programming language type corresponds to the

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XML schema and provides XML-oriented data manipulation, wherein the object-oriented programming language type extends from a base type that allows the combination of XML and object-oriented programming language type systems and can access and manipulate the XML data from within the object-oriented programming language type system; and

executing, via the object-oriented programming language type, one or more XML data operations provided by the XML type system, on the XML data, to generate one or more result sets in the object-oriented programming language type system, wherein each of the one or more XML data operations is one of

an XML data query operation;

an XML data transformation operation; and

an XML data iteration operation.

34. (Currently Amended) The method according to claim 23, further comprising:  
defining [[the]] legal types of the XML data via an XML schema, which include constraints on data types and ranges of the XML data.

44. (Currently Amended) A machine readable storage medium having instructions stored thereon that when executed by a processor cause a system to:

define an extensible markup language (XML) data using an XML schema;

generate, via a compiler running on one or more processors, an object-oriented programming language type from the XML schema, wherein the object-oriented programming language type is automatically generated for an object-oriented programming language

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component as an inner class to an XML control interface for the object-oriented programming language component, wherein the object-oriented programming language type corresponds to the XML schema and provides XML-oriented data manipulation, wherein the object-oriented programming language type extends from a base type that allows the combination of XML and object-oriented programming language type systems and can access and manipulate the XML data from within the object-oriented programming language type system; and

execute, via the object-oriented programming language type, one or more XML data operations provided by the XML type system, on the XML data, to generate one or more result sets in the object-oriented programming language type system, wherein each of the one or more XML data operations is one of

- an XML data query operation;
- an XML data transformation operation; and
- an XML data iteration operation.

55. (Currently Amended) The machine readable storage medium of claim 44, further comprising instructions that when executed cause the system to:

define [[the]] legal types of the XML data via an XML schema, which include constraints on data types and ranges of the XML data.

67. (Canceled)



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68. (Currently Amended) The computer-implemented system according to claim 1, ~~further comprising wherein:~~

~~sharing an the object-oriented programming language type is shared among multiple object-oriented programming language components, by explicitly referring the object-oriented programming language type when an object-oriented programming language component is defined.~~

69. (Currently Amended) The computer-implemented system according to claim 1, wherein:

the object-oriented programming language type is both validated by one or more schema in XML type system and checked under the object-oriented programming language type system.

-- END OF AMENDMENT --

***Reasons for Allowance***

15. The following is an Examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, "wherein the object-oriented programming language type is automatically generated for an object-oriented programming language component as an inner class to an XML control interface for the object-oriented programming language component" as recited in independent Claims 1, 23, and 44.

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The closest cited prior art, US 7,155,705 (hereinafter “Hershberg”), teaches techniques for binding a data exchange format, such as XML, to an application based on tags in comments of source code for the application. However, Hershberg fails to teach “wherein the object-oriented programming language type is automatically generated for an object-oriented programming language component as an inner class to an XML control interface for the object-oriented programming language component” as recited in independent Claims 1, 23, and 44.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner’s supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191